Package 'hans'

September 27, 2019

Type Package

Title Haversines are not Slow

Version 0.1

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Encoding UTF-8

Description The haversine is a function used to calculate the distance between a pair of latitude and longitude points while accounting for the assumption that the points are on a spherical globe. This package provides a fast, dataframe compatible, haversine function. For the first publication on the haversine calculation see Joseph de Mendoza y Ríos (1795) <https://books.google.cat/books?id=030t0OqlX2AC> (In Spanish).

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Imports Rcpp (>= 1.0.1)

LinkingTo Rcpp

Suggests testthat (>= 2.1.0)

RoxygenNote 6.1.1

NeedsCompilation yes

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R topics documented:

`haversine` *Calculate the haversine distance in kilometers given lat/lon pairs*

Description

Calculate the haversine distance in kilometers given lat/lon pairs

Usage

```
haversine(lat1, lon1, lat2, lon2)
```

Arguments

`lat1`	A vector of latitudes
`lon1`	A vector of longitudes
`lat2`	A vector of latitudes
`lon2`	A vector of longitudes

Value

a vector of distances in kilometers

Examples

```
# simple haversine calculation
lon1 <- runif(-160, -60, n = 10e6)
lat1 <- runif(40, 60, n = 10e6)
lon2 <- runif(-160, -60, n = 10e6)
lat2 <- runif(40, 60, n = 10e6)
df <- data.frame(lat1, lon1, lat2, lon2)
df$havers <- haversine(df$lat1, df$lon1, df$lat2, df$lon2)
```

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